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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,855	10/12/2001	Atsushi Kota	61610257US	7448

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EXAMINER

SHENG, TOM V

ART UNIT PAPER NUMBER

2677

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,855

Applicant(s)

KOTA ET AL.

Examiner

Tom V. Sheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,049,865) in view of Kim et al. (US 6,265,833 B1).

As for claim 15, Nakamura teaches an image display apparatus (display apparatus having an X-Y matrix type display panel; fig. 2, 3) comprising:

an image display section (display panel 5) having display elements (inherent) arranged in a matrix at intersections of a plurality of scan lines (Y1 ... Ym) and a plurality of data lines (X1 ... Xn);

a control circuit (display mode switching circuit 14, driving control circuit 1, gates 10, 11, 61 and an inherent image signal processor) which selects one of scanning modes (single electrode scanning mode and double electrode scanning mode) as an operation mode in response to a mode switching signal (display mode switching signal 15), and outputs a data signal (inherent) and a scan control signal (output of OR gate 10 or 11) based on an image signal (inherent) to be displayed and said scanning mode (column 2, line 12 through column 3, line 46);

a row driving section (Y-odd number electrode driving circuit 3 and Y-even number electrode driving circuit 4) connected to said plurality of scan lines (as shown) to sequentially drive said plurality of scan lines based on said scan control signal (as determined by outputs of OR gates 10 and 11);

a column driving section (X electrode driving circuit 2) connected to said plurality of data lines (as shown) to sequentially drive said plurality of data lines based on said data signal (inherent);

wherein an image corresponding to said image signal is displayed on said image display section (inherent), and

wherein said scan control signal controls a scan direction of said plurality of scan lines (always scanned from top to bottom), a number of said plurality of scan lines that are selected (either one scan line or two scan lines at a time), and a location of said plurality of scan lines that are selected (either one by one as Y1, Y2, etc. or two by two as Y1/Y2, Y3/Y4, etc.).

However, Nakamura does not teach that the display elements are light emitting elements. Further, Nakamura does not teach an external brightness sensor which detects brightness of a peripheral portion of said image display apparatus; and a CPU which outputs said mode switching signal and said image signal to said control circuit based on designation by a user, and outputs said mode switching signal to said control circuit based on the detected brightness by said external brightness.

Kim teaches a control circuit (controller 3; figure 3) which selects one of modes (second, third, or fourth driving modes; figure 4) as an operation mode, for a self

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emitting display device, in response to a mode switching signal (signal converted by the optical signal converter 2), and outputs a data signal (inherent) based on an image signal to be displayed (inherent) and said selected mode;

an external brightness sensor (optical sensor 1 and optical signal converter 2; figure 1) which detects brightness of a peripheral portion of said image display apparatus (senses intensity of light of the outside environment); and

a CPU (done by driving mode selector 3a of controller 3) which outputs said mode switching signal (indicating second, third, or fourth driving mode) and said image signal (inherently from controller 3) to said control circuit based on designation by a user (the driving current and voltage of the different driving modes are preset or could be preset by the user; column 6, line 60 through column 7, line 2) and outputs said mode switching signal to said control circuit based on the detected brightness by said external brightness (as determined by driving mode selector 3a), whereby an image corresponding to said image signal is displayed on said image display section (panel 5). See column 5, line 5 through column 6, line 26.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate Kim's teaching of display brightness control in a light emitting display based on detected external brightness in Nakamura's display driving modes because it allows a viewer a good visibility even with changing ambience lighting without unnecessary power consumption.

Claim 1 is associated with apparatus claim 15. Further, the limitation "wherein a current of said data signal is based on said selected mode" is taught by Kim's driving

current as determined by a driving mode selected. Incorporating this feature would allow further power consumption control via driving voltage and current.

Claim 2 is read by Nakamura's one by one scanning.

As for claim 16, one of ordinary skill in the art would recognize that when battery is low, one would desire a lower brightness for power saving sake over desirable display brightness.

As for claim 17, it is certainly desirable for a user to set a nominal brightness of display to his/her liking upon receiving a phone call.

Claim 18 is read by Kim's self-emitting display, which can be EL, LED, FED or PDP (column 1, lines 11-16).

3. Claim 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura and Kim, as applied to claim 1 or 15 above, and further in view of Kuwata et al. (EP Application Publication 0617399 A1).

As to claims 3-5 and 7-14, Nakamura/Kim is silent as to the specific driving schemes in the double scan or double sequential scan driving methods as claimed. On the other hand, Kuwata teaches a multiple line selection method where a plurality of scanning lines is selected at a time (column 3, lines 2-25). This would solve the frame response issue (column 1, lines 19-47). Note also that the rows driven together needs not be continuously arranged. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to incorporate any form of

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Kuwata's MLS as the scanning method in Nakamura/Kim's invention, thus further preventing any frame response issue.

As for claim 6, a monochromatic display can be provided simply by turning off the other two color pixels or by making all 3-color pixels same intensity obvious to one of ordinary skill in the art. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide for either color or monochromatic display as the image signal dictates.

Response to Arguments

4. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
January 4, 2006

AMR A. AWAD
PRIMARY EXAMINER
Amr Awad